

**Colour Video Clock Crystal**  
Runs at 4.4336 MHz

**Z80A Central Processor Unit**  
Note the 'temporary modification' to Version 2 motherboards, bridging pins 11 and 30 together with a transistor. The effect of this modification is to allow the ULA to be selected only when address line zero and the 'DRQ (Data/Output Request) are both low together.

**Voltage Regulator**

## SINCLAIR SPECTRUM

### PRICE

£99.95 (16K version)  
£129.95 (48K version)

### DIMENSIONS

233 x 144 x 30mm

### CPU

Z80A

### MEMORY CAPACITY AND SPEED

16K and 48K  
3.5 MHz

### SCREEN CHARACTERISTICS

The screen is divided into 24 lines of 32 characters. Bit-mapped graphics with a 256 x 192 resolution. 16 pre-programmed block graphics characters plus 21 user-definable graphics characters. Eight colours plus flash and two brightness levels. Independent border colour

### INTERFACES AND PORTS

System bus connector. Sockets for cassette storage and TV

### AVAILABLE LANGUAGES

BASIC and Z80 Assembly language. Further expansion via software allows FORTH, LOGO, Micro-PROLOG and many others to be used

### KEYBOARD

40 moving-key membrane ASCII keyboard. The design allows up to eight functions to be accessed from one key via a series of Shift keys

### DOCUMENTATION

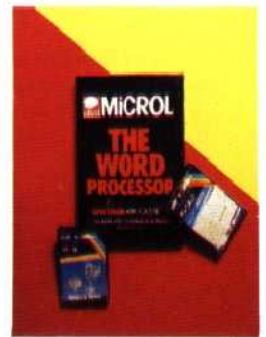
The computer comes complete with an introductory manual and a main manual containing a guide to the micro's operation as well as advice on Sinclair BASIC

### STRENGTHS

At £130 for a 48K version, the Spectrum offers an ideal opportunity for the newcomer to experiment. The Spectrum is also blessed with much greater software and hardware support from independent producers than any other computer

### WEAKNESS

The keyboard, although cleverly designed, does not offer typewriter-like facilities. The screen display is configured in a highly non-standard way, which may cause problems for the inexperienced



### The Spectrum File

In addition to the vast number of games packages available for the Spectrum, there is also a very respectable body of business and household software on the market, much of it priced at less than £10. With the introduction of the ZX Microdrive, there is no reason at all why the Spectrum cannot maintain large databases, spreadsheets and word processing applications.

Psion, one of Sinclair's closest collaborators in the field of software production, has been responsible for originating much of this material. Most notably it has produced the successful VU-series of packages, including VU-CALC, VU-File and VU-3D. And despite the deficiencies of the Spectrum's keyboard, Microl have produced The Word Processor, which offers storage space for up to 10 A4 pages of text, and most of the facilities normally found in more complete text editing packages (including the ability to merge files)